



START copy

EPA Region 5 Records Ctr.



269174

ENSR International
27755 Diehl Road
Warrenville, IL 60555
(630) 836-1700
FAX (630) 836-1711
www.ensr.com

June 25, 2004

Mr. Steve Faryan
U.S. Environmental Protection Agency
77 W. Jackson Blvd, Mailcode SE-5J
Chicago, IL 60604

Mr. Kevin Turner
U.S. Environmental Protection Agency
8588 Route 148
Marion, IL 62959

**RE: Addendum - Initial Vapor Migration Pathway Work Plan
Hartford Area Hydrocarbon Plume Site
Hartford, Illinois
ENSR Project No. 01005-093-350**

Dear Sirs:

Enclosed are two copies of the Addendum to Initial Vapor Migration Pathway Assessment Work Plan for Hartford, Illinois. ENSR Corporation prepared this work plan addendum on behalf of the Hartford Working Group. This document is in response to the U.S. Environmental Protection Agency (EPA) and Illinois EPA review comments (dated April 12, 2004) to the Initial Vapor Migration Pathway Assessment Work Plan submitted February 2004.

Please contact us at (630) 836-1700 if you have any questions or comments.

Sincerely,

ENSR Corporation

David Schumacher (P.G.)

David A. Schumacher, P.G.
Program Manager

John L. Petruccione

John L. Petruccione, P.G.
Geoscience Section Manager

enclosure: *Addendum - Initial Vapor Migration Pathway Assessment Work Plan, June 2004*

cc: T. Binz – Tetra Tech, Inc.
J. Moore – IEPA
C. Cahnovsky – IEPA

Start

**Hartford Working Group
Hartford, Illinois**



**Addendum - Initial Vapor
Migration Pathway Assessment
Work Plan**

**Hartford Area Hydrocarbon
Plume Site, Hartford, Illinois**

Prepared for:

U.S. Environmental Protection Agency

Prepared by:

ENSR Corporation

June 2004

Project Number 01005-093-350

Hartford Working Group Hartford, Illinois

Addendum - Initial Vapor Migration Pathway Assessment Work Plan

Hartford Area Hydrocarbon Plume Site, Hartford, Illinois

Prepared for:

U.S. Environmental Protection Agency

Prepared by:

ENSR Corporation

June 2004

Project Number 01005-093-350

TABLE OF CONTENTS

1.0 INTRODUCTION.....	1-1
2.0 REVISED VMPA SAMPLING LOCATIONS.....	2-1
3.0 SEWER ASSESSMENT.....	3-1
4.0 ADDITIONAL EVALUATIONS AND REPORT PREPARATION.....	4-1

LIST OF FIGURES

- FIGURE 1 Proposed Vapor Migration Pathway Assessment Sampling Locations
FIGURE 2 Proposed Sewer Monitoring Location Map

1.0 INTRODUCTION

ENSR Corporation (ENSR), on behalf of the Hartford Working Group (HWG), has prepared this addendum to the Initial Vapor Migration Pathway Assessment (VMPA) Work Plan submitted to the United States Environmental Protection Agency (USEPA; the "Agency") on February 20, 2004. USEPA approved the VMPA Work Plan on April 12, 2004, subject to several conditions and modifications stated in the approval letter. Most notably, the Initial VMPA was considered by the USEPA as only a "first-phase" of an overall effort to assess subsurface migration of vapors within the northern one-half of the Village of Hartford, Illinois (the "Village"). An expanded subsurface vapor migration investigation is the primary focus of and reason for preparing this addendum. This addendum also addresses investigation of storm and sanitary sewers, as requested by the USEPA.

The Initial VMPA was conducted at two locations in April 2004 and a Draft Initial Vapor Migration Pathway Assessment Report was prepared on behalf of the HWG and submitted to USEPA on June 1, 2004. During the initial investigation, ENSR was only granted access to two of the 12 properties proposed for the Initial VMPA. Therefore, limited data interpretation was made in the Initial VMPA Report due to a limited spatial sampling.

As requested by the Agencies and assuming access to properties can be secured for the sampling effort, more comprehensive geologic, utility trench, and sewer main data will be obtained during the expanded VMPA. The objectives of the expanded VMPA are the same as for the Initial VMPA. However, this investigation will not be a "focussed" study at specific locations, but rather will be more regional in scope to include targeting areas outside of the extent of residual free-phase hydrocarbons defined in the ROST™ investigation conducted by Clayton Group Services, Inc.

The following sections present the revised sampling locations for the VMPA and the sewer assessment.

2.0 REVISED VMPA SAMPLING LOCATIONS

ENSR has requested and received permission from the Village of Hartford to expand the VMPA into right-of-way area located within the Village. **Figure 1** illustrates the boundary of the VMPA survey area and presents the revised sampling locations. The following sections describe the revised locations.

A minimum of 29 soil vapor sampling points (12 permanent and 17 passive) will be installed within Village right-of-ways (**Figure 1**). Some of the borings will be positioned along utility alignments (intersect trench fill) to assess if these are potential pathways for vapors to migrate. The soil vapor sampling will include the following:

- Eight nested soil vapor sampling ports (VMP-12, VMP-13, VMP-15, VMP-18, VMP-19, VMP-20, VMP-22, and VMP-23; shallow, mid range, and deep ports) will be installed within Village of Hartford's right-of-ways to assess potential vapor migration through shallow geologic pathways (i.e., native soils) and to determine the extent of vapor migration. Three of these eight nested ports will be installed adjacent to the existing sentinel wells (**Figure 1**).
- Four soil vapor sampling ports (VMP-14, VMP-16, VMP-17, and VMP-21) will be installed adjacent to Village of Hartford sewers to assess potential vapor migration along utility corridors.
- Seventeen passive soil vapor sampling points (PMP-1 through PMP-17; **Figure 1**) will be installed using passive sampling media (GORE-Sorbers™) in an effort to assess the extent of shallow petroleum vapor migration (range between 3-to-10 feet below ground surface [bgs]), and also will be utilized in an attempt to better define the buffer zone. Based on the outcome of these data, an additional number of passive probes (estimate 30 locations) will be installed to further refine the vapor plume lateral limits as well as preferential pathways along utility alignments. For example, additional probes will likely be positioned along the northern survey area boundary (see **Figure 1**).

Soil vapor samples will be collected from selected existing sampling ports installed by Clayton in 2003 (West Date Street - MP-10, MP-11, and MP-12 shallow and deep ports; East Birch Street - MP- 5 through MP-9 shallow and deep ports; and East Forest Street - MP-13 through MP-16 shallow and deep ports; **Figure 1**). Samples will be collected to assess potential vapor migration through geologic pathways.

Soil vapor samples will be collected from three existing sampling ports (VMP-1, VMP-2 and VMP-3) installed by ENSR along Arbor Street (**Figure 1**). Samples will be collected to assess potential vapor migration along sewer line corridor.

Soil vapor samples will be collected from four existing sampling ports installed by Clayton in April 2004 during sewer replacement along East Watkins Street (**Figure 1**). Samples will be collected to assess potential migration along the sewer line corridor.

Additionally, "step-out" borings positioned outside of utility trenches will be drilled at selected locations in an attempt to characterize the occurrence of possible lateral vapor migration from utility trenches. ENSR estimates up to 10 additional sampling points will be constructed to assess lateral migration outboard of utility line trenching. Locations of these sampling points will be based on the outcome of soil vapor data collected within utility trenches.

As a means of estimating potential vapor flow gradients, a transect consisting of at least three sampling points (spaced approximately 10-to20 feet apart) will be installed along a selected sewer lateral trench. This location will be selected based on outcome of the soil vapor data and other available subsurface information.

Drilling at each location will include continuous soil sampling with a maximum depth of borings expected to be 35 feet bgs. Field description of soil samples will be conducted by an ENSR field scientist along with field screening of samples using a photoionization detector (PID) and a flame ionization detector (FID).

Selected soil samples displaying elevated PID readings will be analyzed for volatile organic compounds (VOCs) using the USEPA Method 5035/8260. Representative soil samples will also be collected and tested for soil moisture and porosity.

Three (shallow, middle, deep) stainless steel vapor ports will be installed at each of the permanent boring locations. Permanent soil vapor sampling points will have flush-mounted covers set in concrete and may be used to collect soil vapor samples at different times throughout the year. The temporary collection points, once installed, will only be needed for up to four weeks and will be completed with a temporary flush-mounted cap. These locations will be abandoned with backfill and granular bentonite and surface conditions restored with like material (e.g., grass, asphalt, concrete).

Summa™ canisters will be connected to the active soil vapor ports, and samples will be collected for 30 minutes. A regulator set to less than 0.2 liters/minute will be used for the Summa™ canister samples. In the event adequate sample cannot be obtained using a Summa™ canister, a grab Tedlar™ bag sample will be collected at the active soil vapor port. Grab Tedlar™ bag samples will be collected using a vacuum box.

In conjunction with the soil vapor sampling, ENSR will measure and sample outdoor ambient air quality at locations in the Village such as at selected residences, the Community Center, and above sewer manhole grates.

3.0 SEWER ASSESSMENT

A qualitative screening of the sewer system air quality at each of the 52 sanitary sewer manhole locations located north of Hawthorne Street will be performed (see **Figure 2** locations). The screening instruments to be used will include a combustible gas indicator (CGI), PID, and FID.

At each sewer main screening location flexible tubing will be either inserted through existing manhole openings, where possible, or the manhole cover will be removed. LEL, PID, and FID readings will be recorded at the top of the manhole (methane is lighter than air) and at the bottom of the manhole (petroleum vapors are denser than air). The vertical readings will be an attempt to determine whether or not stratification of methane and petroleum hydrocarbon vapors exists within the sewer manholes.

Manhole covers will be removed and standing water within the sewer, if present, will be assessed for the presence or absence of free-product by either visual observation, a hydrocarbon paste coated dipstick, or other means to qualitatively detect petroleum hydrocarbons without physical entry into the sewer.

If hydrocarbons (i.e., sheen or measurable product thickness) are present, a grab sample using a dip cup or other means will be collected, packaged, and shipped to an analytical laboratory for chemical analyses. Analytical testing will include simulated distillation to identify the type of free-product (methods and laboratory to be determined). Results will be tabulated and compared to existing vicinity ROST™ soil and groundwater analytical data to determine if there exists correlation between product within sewers versus constituents present within surrounding geologic formation or utility trench backfill.

Based on the outcome of the sewer main screening, grab air samples will be collected at a select number of manhole locations (estimated at 15 to 20% of the total) where elevated LEL, PID, and/or FID readings were observed.

Two grab air samples, situated at shallow and deep positions within the sewer invert, will be collected at these manhole locations using GORE-Sorber™ and Summa™ canisters. Summa™ canister samples will be delivered to an analytical laboratory for analyses of petroleum VOCs, methane, CO₂, and oxygen. Passive (GORE-Sorber™) samples will be submitted for analyses of BTEX, MTBE, Octane, Undecane, Tridecane, Pentadecane, 1,3,5- and 1,2,4-Trimethylbenzene, Naphthalene, 2-Methylnaphthalene, and TPH. Air quality results will be tabulated and graphically displayed with depth in an effort to further characterize locations with elevated LEL, PID, and FID readings. Furthermore, these results will be correlated, if possible, with existing data sets such as ROST™ and soil and groundwater chemistry.

4.0 ADDITIONAL EVALUATIONS AND REPORT PREPARATION

In addition to the above field tasks, the following will be conducted:

- ◆ Further review of available studies, including the video inspection of the sewers, review of the Clayton's ROST™ data, area geology, hydrostratigraphy, and the subsurface vertical and lateral extent and distribution of petroleum hydrocarbons.
- ◆ Develop isoconcentration maps relative to depth (shallow, middle, deep) for detected compounds from either Summa™/Tedlar™ bag soil vapor or chemical analytical (e.g., USEPA Method 8260) results. If warranted, cross-sections illustrating subsurface geology and constituent isoconcentrations will be created to visualize the lateral and vertical extent of vapors.
- ◆ ENSR will prepare a report document that incorporates data collected from this fieldwork, previous ENSR data findings, and the ROST™ findings in an attempt to determine vapor migration pathways.
- ◆ Interpretations based on the expanded findings will be included in the report and, if warranted, recommendations such as additional sampling or design and implementation of remedial actions will be incorporated.

To date, ENSR has completed review of available documents including the Clayton report, sewer alignment schematics provided by Village of Hartford, and video inspection survey data. In addition, ENSR has initiated the fieldwork to include shallow (~3 feet bgs) passive soil vapor sample installation at 130 and 134 East Watkins Street using the GORE-Sorber™ samplers.

ENSR will coordinate the fieldwork with the Village of Hartford Public Works Department who will accompany ENSR during the field investigation. In addition, the Joint Utility Location Information for Excavators (JULIE) will be contacted to clear boring locations once they are marked. Utility line positions will need to be accurately located prior to drilling. This may require hand digging or other means to expose known pipelines prior to drilling.

Weather conditions will be recorded by a weather station to be installed by Clayton within the Village. Instrumentation will monitor barometric pressure, temperature, precipitation, wind speed and wind direction. These parameters will be monitored and recorded during the soil vapor port sampling events.

The fieldwork is expected to begin in July 2004 with the initial round of sampling to be completed by the end of August 2004. Assuming the fieldwork can be completed by the end of August, a revised Vapor Migration Pathway Assessment Report will be prepared and submitted to the Agency by the end of October 2004. This report will be a modification of and addition to the Draft VMPA Report submitted to the Agency on June 1, 2004.

Hartford Working Group Hartford, Illinois

Addendum - Initial Vapor Migration Pathway Assessment Work Plan

Hartford Area Hydrocarbon Plume Site, Hartford, Illinois

Prepared for:

U.S. Environmental Protection Agency

Prepared by:

ENSR Corporation

June 2004

Project Number 01005-093-350

TABLE OF CONTENTS

1.0 INTRODUCTION.....	1-1
2.0 REVISED VMPA SAMPLING LOCATIONS.....	2-1
3.0 SEWER ASSESSMENT.....	3-1
4.0 ADDITIONAL EVALUATIONS AND REPORT PREPARATION.....	4-1

1.0 INTRODUCTION

ENSR Corporation (ENSR), on behalf of the Hartford Working Group (HWG), has prepared this addendum to the Initial Vapor Migration Pathway Assessment (VMPA) Work Plan submitted to the United States Environmental Protection Agency (USEPA; the "Agency") on February 20, 2004. USEPA approved the VMPA Work Plan on April 12, 2004, subject to several conditions and modifications stated in the approval letter. Most notably, the Initial VMPA was considered by the USEPA as only a "first-phase" of an overall effort to assess subsurface migration of vapors within the northern one-half of the Village of Hartford, Illinois (the "Village"). An expanded subsurface vapor migration investigation is the primary focus of and reason for preparing this addendum. This addendum also addresses investigation of storm and sanitary sewers, as requested by the USEPA.

The Initial VMPA was conducted at two locations in April 2004 and a Draft Initial Vapor Migration Pathway Assessment Report was prepared on behalf of the HWG and submitted to USEPA on June 1, 2004. During the initial investigation, ENSR was only granted access to two of the 12 properties proposed for the Initial VMPA. Therefore, limited data interpretation was made in the Initial VMPA Report due to a limited spatial sampling.

As requested by the Agencies and assuming access to properties can be secured for the sampling effort, more comprehensive geologic, utility trench, and sewer main data will be obtained during the expanded VMPA. The objectives of the expanded VMPA are the same as for the Initial VMPA. However, this investigation will not be a "focussed" study at specific locations, but rather will be more regional in scope to include targeting areas outside of the extent of residual free-phase hydrocarbons defined in the ROST™ investigation conducted by Clayton Group Services, Inc.

The following sections present the revised sampling locations for the VMPA and the sewer assessment.

2.0 REVISED VMPA SAMPLING LOCATIONS

ENSR has requested and received permission from the Village of Hartford to expand the VMPA into right-of-way area located within the Village. **Figure 1** illustrates the boundary of the VMPA survey area and presents the revised sampling locations. The following sections describe the revised locations.

A minimum of 29 soil vapor sampling points (12 permanent and 17 passive) will be installed within Village right-of-ways (**Figure 1**). Some of the borings will be positioned along utility alignments (intersect trench fill) to assess if these are potential pathways for vapors to migrate. The soil vapor sampling will include the following:

- Eight nested soil vapor sampling ports (VMP-12, VMP-13, VMP-15, VMP-18, VMP-19, VMP-20, VMP-22, and VMP-23; shallow, mid range, and deep ports) will be installed within Village of Hartford's right-of-ways to assess potential vapor migration through shallow geologic pathways (i.e., native soils) and to determine the extent of vapor migration. Three of these eight nested ports will be installed adjacent to the existing sentinel wells (**Figure 1**).
- Four soil vapor sampling ports (VMP-14, VMP-16, VMP-17, and VMP-21) will be installed adjacent to Village of Hartford sewers to assess potential vapor migration along utility corridors.
- Seventeen passive soil vapor sampling points (PMP-1 through PMP-17; **Figure 1**) will be installed using passive sampling media (GORE-Sorbers™) in an effort to assess the extent of shallow petroleum vapor migration (range between 3-to-10 feet below ground surface [bgs]), and also will be utilized in an attempt to better define the buffer zone. Based on the outcome of these data, an additional number of passive probes (estimate 30 locations) will be installed to further refine the vapor plume lateral limits as well as preferential pathways along utility alignments. For example, additional probes will likely be positioned along the northern survey area boundary (see **Figure 1**).

Soil vapor samples will be collected from selected existing sampling ports installed by Clayton in 2003 (West Date Street - MP-10, MP-11, and MP-12 shallow and deep ports; East Birch Street - MP- 5 through MP-9 shallow and deep ports; and East Forest Street - MP-13 through MP-16 shallow and deep ports; **Figure 1**). Samples will be collected to assess potential vapor migration through geologic pathways.

Soil vapor samples will be collected from three existing sampling ports (VMP-1, VMP-2 and VMP-3) installed by ENSR along Arbor Street (**Figure 1**). Samples will be collected to assess potential vapor migration along sewer line corridor.

Soil vapor samples will be collected from four existing sampling ports installed by Clayton in April 2004 during sewer replacement along East Watkins Street (**Figure 1**). Samples will be collected to assess potential migration along the sewer line corridor.

Additionally, "step-out" borings positioned outside of utility trenches will be drilled at selected locations in an attempt to characterize the occurrence of possible lateral vapor migration from utility trenches. ENSR estimates up to 10 additional sampling points will be constructed to assess lateral migration outboard of utility line trenching. Locations of these sampling points will be based on the outcome of soil vapor data collected within utility trenches.

As a means of estimating potential vapor flow gradients, a transect consisting of at least three sampling points (spaced approximately 10-to20 feet apart) will be installed along a selected sewer lateral trench. This location will be selected based on outcome of the soil vapor data and other available subsurface information.

Drilling at each location will include continuous soil sampling with a maximum depth of borings expected to be 35 feet bgs. Field description of soil samples will be conducted by an ENSR field scientist along with field screening of samples using a photoionization detector (PID) and a flame ionization detector (FID).

Selected soil samples displaying elevated PID readings will be analyzed for volatile organic compounds (VOCs) using the USEPA Method 5035/8260. Representative soil samples will also be collected and tested for soil moisture and porosity.

Three (shallow, middle, deep) stainless steel vapor ports will be installed at each of the permanent boring locations. Permanent soil vapor sampling points will have flush-mounted covers set in concrete and may be used to collect soil vapor samples at different times throughout the year. The temporary collection points, once installed, will only be needed for up to four weeks and will be completed with a temporary flush-mounted cap. These locations will be abandoned with backfill and granular bentonite and surface conditions restored with like material (e.g., grass, asphalt, concrete).

Summa™ canisters will be connected to the active soil vapor ports, and samples will be collected for 30 minutes. A regulator set to less than 0.2 liters/minute will be used for the Summa™ canister samples. In the event adequate sample cannot be obtained using a Summa™ canister, a grab Tedlar™ bag sample will be collected at the active soil vapor port. Grab Tedlar™ bag samples will be collected using a vacuum box.

In conjunction with the soil vapor sampling, ENSR will measure and sample outdoor ambient air quality at locations in the Village such as at selected residences, the Community Center, and above sewer manhole grates.

3.0 SEWER ASSESSMENT

A qualitative screening of the sewer system air quality at each of the 52 sanitary sewer manhole locations located north of Hawthorne Street will be performed (see **Figure 2** locations). The screening instruments to be used will include a combustible gas indicator (CGI), PID, and FID.

At each sewer main screening location flexible tubing will be either inserted through existing manhole openings, where possible, or the manhole cover will be removed. LEL, PID, and FID readings will be recorded at the top of the manhole (methane is lighter than air) and at the bottom of the manhole (petroleum vapors are denser than air). The vertical readings will be an attempt to determine whether or not stratification of methane and petroleum hydrocarbon vapors exists within the sewer manholes.

Manhole covers will be removed and standing water within the sewer, if present, will be assessed for the presence or absence of free-product by either visual observation, a hydrocarbon paste coated dipstick, or other means to qualitatively detect petroleum hydrocarbons without physical entry into the sewer.

If hydrocarbons (i.e., sheen or measurable product thickness) are present, a grab sample using a dip cup or other means will be collected, packaged, and shipped to an analytical laboratory for chemical analyses. Analytical testing will include simulated distillation to identify the type of free-product (methods and laboratory to be determined). Results will be tabulated and compared to existing vicinity ROST™ soil and groundwater analytical data to determine if there exists correlation between product within sewers versus constituents present within surrounding geologic formation or utility trench backfill.

Based on the outcome of the sewer main screening, grab air samples will be collected at a select number of manhole locations (estimated at 15 to 20% of the total) where elevated LEL, PID, and/or FID readings were observed.

Two grab air samples, situated at shallow and deep positions within the sewer invert, will be collected at these manhole locations using GORE-Sorber™ and Summa™ canisters. Summa™ canister samples will be delivered to an analytical laboratory for analyses of petroleum VOCs, methane, CO₂, and oxygen. Passive (GORE-Sorber™) samples will be submitted for analyses of BTEX, MTBE, Octane, Undecane, Tridecane, Pentadecane, 1,3,5- and 1,2,4-Trimethylbenzene, Naphthalene, 2-Methylnaphthalene, and TPH. Air quality results will be tabulated and graphically displayed with depth in an effort to further characterize locations with elevated LEL, PID, and FID readings. Furthermore, these results will be correlated, if possible, with existing data sets such as ROST™ and soil and groundwater chemistry.

4.0 ADDITIONAL EVALUATIONS AND REPORT PREPARATION

In addition to the above field tasks, the following will be conducted:

- ◆ Further review of available studies, including the video inspection of the sewers, review of the Clayton's ROST™ data, area geology, hydrostratigraphy, and the subsurface vertical and lateral extent and distribution of petroleum hydrocarbons.
- ◆ Develop isoconcentration maps relative to depth (shallow, middle, deep) for detected compounds from either Summa™/Tedlar™ bag soil vapor or chemical analytical (e.g., USEPA Method 8260) results. If warranted, cross-sections illustrating subsurface geology and constituent isoconcentrations will be created to visualize the lateral and vertical extent of vapors.
- ◆ ENSR will prepare a report document that incorporates data collected from this fieldwork, previous ENSR data findings, and the ROST™ findings in an attempt to determine vapor migration pathways.
- ◆ Interpretations based on the expanded findings will be included in the report and, if warranted, recommendations such as additional sampling or design and implementation of remedial actions will be incorporated.

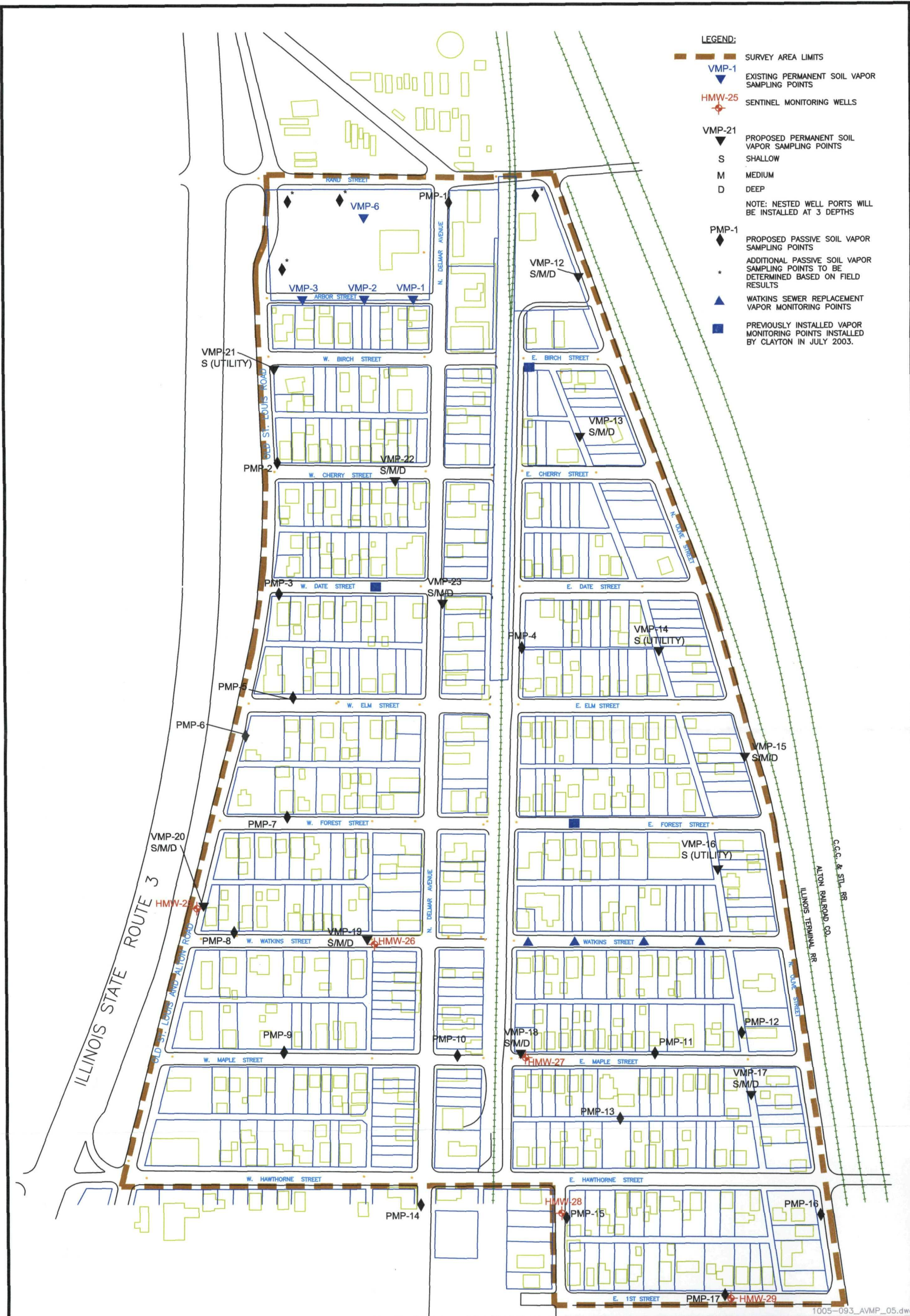
To date, ENSR has completed review of available documents including the Clayton report, sewer alignment schematics provided by Village of Hartford, and video inspection survey data. In addition, ENSR has initiated the fieldwork to include shallow (~3 feet bgs) passive soil vapor sample installation at 130 and 134 East Watkins Street using the GORE-Sorber™ samplers.

ENSR will coordinate the fieldwork with the Village of Hartford Public Works Department who will accompany ENSR during the field investigation. In addition, the Joint Utility Location Information for Excavators (JULIE) will be contacted to clear boring locations once they are marked. Utility line positions will need to be accurately located prior to drilling. This may require hand digging or other means to expose known pipelines prior to drilling.

Weather conditions will be recorded by a weather station to be installed by Clayton within the Village. Instrumentation will monitor barometric pressure, temperature, precipitation, wind speed and wind direction. These parameters will be monitored and recorded during the soil vapor port sampling events.

The fieldwork is expected to begin in July 2004 with the initial round of sampling to be completed by the end of August 2004. Assuming the fieldwork can be completed by the end of August, a revised Vapor Migration Pathway Assessment Report will be prepared and submitted to the Agency by the end of October 2004. This report will be a modification of and addition to the Draft VMPA Report submitted to the Agency on June 1, 2004.

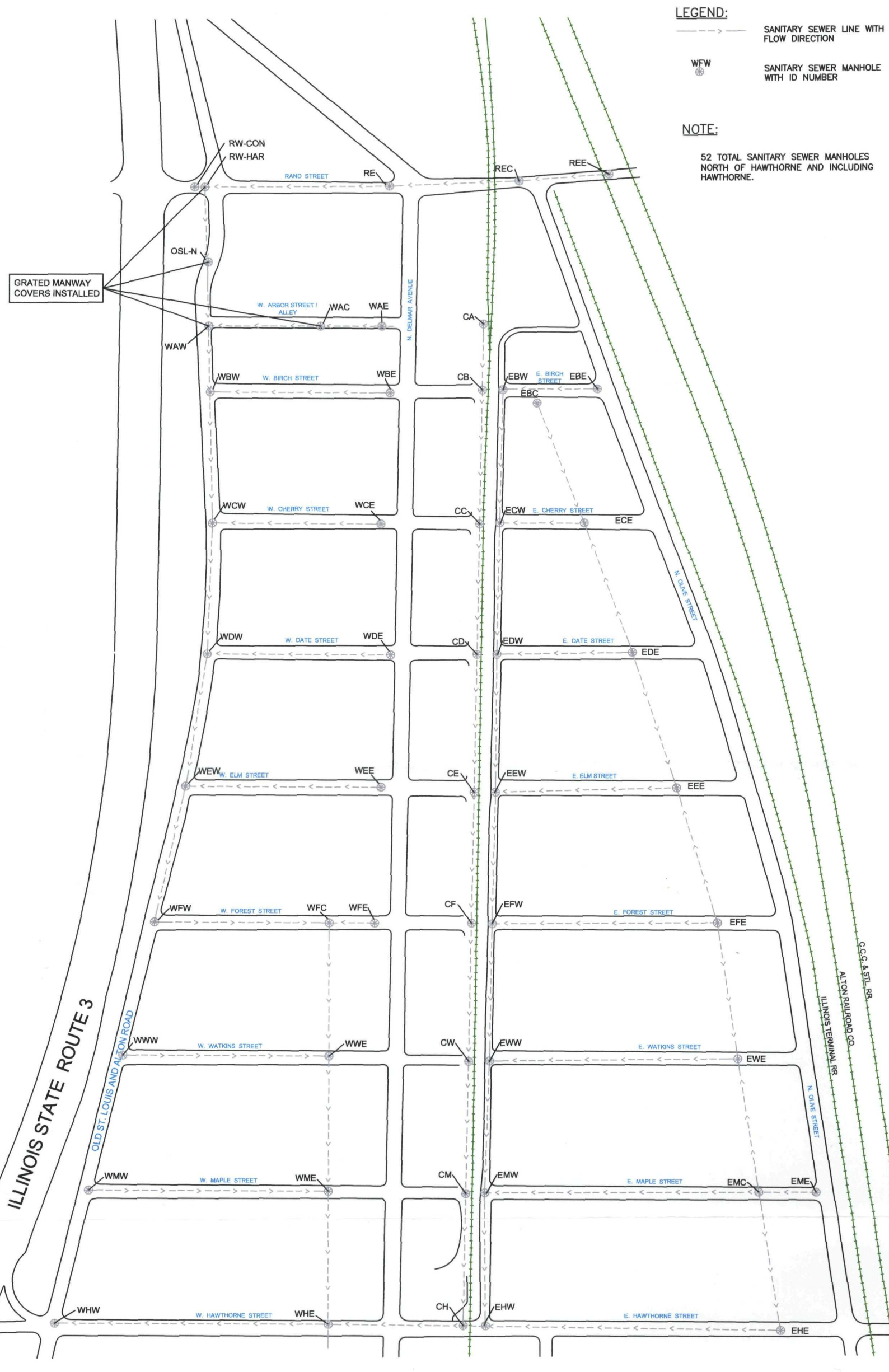
FIGURES



PROPOSED VAPOR MIGRATION PATHWAY
ASSESSMENT SAMPLING LOCATIONS
HARTFORD WORKING GROUP
HARTFORD, IL

FIGURE 1

ENSR



PROPOSED SEWER MONITORING
LOCATION MAP
HARTFORD WORKING GROUP
HARTFORD, IL

ENSR